

General Chemistry Result Summary Cover Sheet

Client: Foster Wheeler

Project: Roxanna Marsh

SDG: 920839

Case Narrative

Client FOSTER WHEELER
Project Name ROXANNA MARSH
Project Number 1980.0208.0100
SDG 920839
Fraction WETCHEM

Lab Number	Sample ID	Collect Date	Rec Date	Matrix
920839-001	FW-RM-15-SS	03/19/2002	03/21/2002	SOIL
920839-002	FW-RM-10-SS	03/19/2002	03/21/2002	SOIL
920839-003	FW-RM-12-SS	03/19/2002	03/21/2002	SOIL
920839-004	FW-RM-16-SS	03/19/2002	03/21/2002	SOIL
920839-005	FW-RM-02-SS	03/19/2002	03/21/2002	SOIL
920839-006	FW-RM-06-SS	03/19/2002	03/21/2002	SOIL
920839-007	FW-RM-05-SS	03/19/2002	03/21/2002	SOIL
920839-008	FW-RM-17-SS	03/19/2002	03/21/2002	SOIL
920839-009	FW-RM-07-SS	03/19/2002	03/21/2002	SOIL
920839-010	FW-RM-08-SS	03/19/2002	03/21/2002	SOIL
920839-011	FW-RM-09-SS	03/19/2002	03/21/2002	SOIL
920839-012	FW-RM-01-SS	03/19/2002	03/21/2002	SOIL
920839-013	FW-RM-04-SS	03/19/2002	03/21/2002	SOIL
920839-014	FW-RM-01-SSMS	03/19/2002	03/21/2002	SOIL
920839-015	FW-RM-03-SS	03/19/2002	03/21/2002	SOIL
920839-017	FW-RM-08-CS-2.3-4.4	03/19/2002	03/21/2002	SOIL
920839-018	FW-RM-08-CS-1-2.3	03/19/2002	03/21/2002	SOIL
920839-019	FW-RM-09-CS-1-3.5	03/19/2002	03/21/2002	SOIL
920839-020	FW-RM-09-CS-3.5-4.9	03/19/2002	03/21/2002	SOIL
920839-021	FW-RM-17-CS-0-1.5	03/19/2002	03/21/2002	SOIL
920839-022	FW-RM-RB-01	03/19/2002	03/21/2002	WATER
920839-023	FW-RM-17-CS-1.5-3.5	03/19/2002	03/21/2002	SOIL
920839-027	FW-RM-01-SSMSD	03/19/2002	03/21/2002	SOIL
920839-028	MB1920839			SOIL
920839-029	MB1920839LCS			SOIL
920839-030	MB1920839LCSD			SOIL

Lab Number	Sample ID	Collect Date	Rec Date	Matrix
920839-031	MB2920839			WATER
920839-032	MB2920839LCS			WATER
920839-033	MB2920839LCSD			WATER
920839-034	MB3920839			SOIL
920839-035	MB3920839LCS			SOIL
920839-036	MB3920839LCSD			SOIL

EnChem Laboratories**COVER PAGE - GENERAL CHEMISTRY ANALYSIS DATA PACKAGE**SDG No.: 920839Contract: ROXANNA MARSH

Lab Sample ID	Client Sample ID	QC Description
920839-001	FW-RM-15-SS	
920839-002	FW-RM-10-SS	
920839-003	FW-RM-12-SS	
920839-004	FW-RM-16-SS	
920839-005	FW-RM-02-SS	
920839-006	FW-RM-06-SS	
920839-007	FW-RM-05-SS	
920839-008	FW-RM-17-SS	
920839-009	FW-RM-07-SS	
920839-010	FW-RM-08-SS	
920839-011	FW-RM-09-SS	
920839-012	FW-RM-01-SS	
920839-013	FW-RM-04-SS	
920839-015	FW-RM-03-SS	
920839-017	FW-RM-08-CS-2.3-4.4	
920839-018	FW-RM-08-CS-1-2.3	
920839-019	FW-RM-09-CS-1-3.5	
920839-020	FW-RM-09-CS-3.5-4.9	
920839-021	FW-RM-17-CS-0-1.5	
920839-023	FW-RM-17-CS-1.5-3.5	
920839-028	MB1920839	Method Blank
920839-029	MB1920839LCS	Laboratory Control Sample
920839-030	MB1920839LCSD	Laboratory Control Sample Duplicate
920839-022	FW-RM-RB-01	
920839-031	MB2920839	Method Blank
920839-032	MB2920839LCS	Laboratory Control Sample
920839-033	MB2920839LCSD	Laboratory Control Sample Duplicate
920839-014	FW-RM-01-SSMS	Matrix Spike
920839-027	FW-RM-01-SSMSD	Matrix Spike Duplicate

Comments:

Signature:



Name

Michael J Helmann

Date:

4/12/02

Title:

Wet Chemistry Group Leader

EN CHEM, INC
CASE NARRATIVE - GENERAL CHEMISTRY ANALYSIS

Lab Report Number (SDG): 920839

Client: Foster Wheeler

Project Name: Roxanna Marsh

Project Number: 1980.0208.0100

1. RECEIPT

Samples were received on ice.

2. HOLDING TIMES

- A. **Sample Preparation:** All method holding times were met.
- B. **Sample Analysis:** All method holding times were met.

3. METHOD

Preparation: EPA DRAFT, 413.1, SW846 9060, 9071A

Analysis: EPA DRAFT, 413.1, SW846 9060, 9071A

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

- A. **Calibration:**
 - 1. **Initial verification:** All method acceptance criteria were met.
 - 2. **Continuing verification:** All method acceptance criteria were met.
- B. **Blanks:**
 - 1. **Initial calibration:** All method acceptance criteria were met.
 - 2. **Continuing calibration:** All method acceptance criteria were met.
 - 3. **Method:** All in-house acceptance criteria were met. Oil and Grease was detected in the method blank at levels greater than the Method Detection Limit (MDL), but less than the Project Specific Reporting Limit (PSRL). All associated results greater than the MDL and less than twenty times the value in the blank were flagged with an "A" data qualifier.
- C. **Spikes:**
 - 1. **Lab Control Spike (LCS):** All in-house accuracy criteria were met.
 - 1. **Matrix Spike / Duplicate (MS/MSD):** Sample FW-RM-01-SS was designated as the MS/MSD for Total Organic Carbon, Acid Volatile Sulfide, and Oil and Grease. All in-house accuracy and precision criteria were met with the following exception. There was no recovery for the MS or MSD for Acid Volatile Sulfide, the spike concentration was insignificant compared to the concentration in the parent sample, thus flagging was not applicable. The MSD for Oil and Grease was low. The parent sample results were flagged with a "N" data qualifier
- D. **Sample Duplicates:** Duplicate sample analysis for Acid Volatile Sulfide, Oil and Grease, and Total Organic Carbon was performed on the Laboratory Control Spike. The in-house precision criteria were met. Duplicate sample analysis for Percent Solids was performed on FW-RM-07-SS. The precision results were high. The parent sample results were flagged with an "*" data qualifier.
- E. **Samples:** Sample analyses proceeded normally.
- F. **Dilutions:**

<u>Sample ID</u>	<u>Reason for dilution</u>
FW-RM-15-SS	Diluted to bring TOC and AVS into calibration
FW-RM-10-SS	Diluted to bring TOC and AVS into calibration
FW-RM-12-SS	Diluted to bring TOC into calibration
FW-RM-16-SS	Diluted to bring TOC and AVS into calibration
FW-RM-02-SS	Diluted to bring TOC and AVS into calibration
FW-RM-06-SS	Diluted to bring TOC and AVS into calibration
FW-RM-05-SS	Diluted to bring TOC and AVS into calibration
FW-RM-17-SS	Diluted to bring TOC and AVS into calibration
FW-RM-07-SS	Diluted to bring TOC and AVS into calibration

FW-RM-08-SS Diluted to bring TOC and AVS into calibration
FW-RM-09-SS Diluted to bring TOC into calibration
FW-RM-01-SS Diluted to bring TOC and AVS into calibration
FW-RM-04-SS Diluted to bring AVS into calibration
FW-RM-03-SS Diluted to bring TOC and AVS into calibration
FW-RM-08-CS-2.3-4.4 Diluted to bring TOC into calibration
FW-RM-08-CS-1-2.3 Diluted to bring TOC into calibration
FW-RM-09-CS-1-3.5 Diluted to bring TOC into calibration
FW-RM-09-CS-3.5-4.9 Diluted to bring TOC into calibration
FW-RM-17-CS-0-1.5 Diluted to bring TOC and AVS into calibration
FW-RM-17-CS-1.5-3.5 Diluted to bring TOC into calibration

- G. **Reanalysis:** None required for this SDG.
H. **Comments:** None.

I certify that this data package is in compliance with the terms and conditions agreed to by **En Chem, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette:

Signed: Michael J. Helmann Date: 4/12/02
Name: Michael J. Helmann Position: Wet Chemistry Group Leader

Inorganic Data Qualifiers

- A Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
- B The analyte has been detected between the method detection limit and the reporting limit.
- C Elevated detection limit due to matrix effects.
- E Estimated concentration due to matrix interferences. During the metals analysis using the inductively coupled plasma (ICP), the serial dilution failed to meet the established control limits of 0-10% and the sample concentration is greater than 50 times the IDL (100 times the IDL for analysis done on the ICP-MS). The result was flagged with the E qualifier to indicate that a physical interference was observed.
- F Due to potential interferences for this analysis by Inductively Coupled Plasma techniques (SW-846 Method 6010), this analyte has been confirmed by and reported from an alternate method.
- H(n) Analysis performed "n" days past holding time (See Sample Narrative).
- K Sample received unpreserved. Sample was either preserved at the time of receipt or at the time of sample preparation.
- L Elevated detection limit due to low sample volume.
- N Spiked sample recovery not within control limits.
- Q The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
- U The analyte was not detected above the reporting limit.
- X See sample narrative.
- & Laboratory Control Spike recovery not within control limits.
- *
- Duplicate analyses not within control limits.
- SUB1 Assay was subcontracted to an approved lab.
- SUB2 Assay was subcontracted to En Chem Green Bay WI Cert. #405132750.
- 1 Dissolved analyte or filtered analyte greater than total analyte; analyses passed QC based on precision criteria.
- 2 Dissolved analyte or filtered analyte greater than total analyte; analyses failed QC based on precision criteria. (See Sample Narrative).
- 3 BOD result is estimated due to the BOD blank exceeding the allowable oxygen depletion.
- 4 BOD duplicate precision not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
- 5 BOD result is estimated due to insufficient oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
- 6 BOD laboratory control sample not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
- 7 BOD result is estimated due to complete oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.

(Please Print Legibly)



Company Name: Fish Wheeler
 Branch or Location: Denver
 Project Contact: Paul Mass
 Telephone: 303 - 280 - 3519

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 Green Bay, WI 54302
 920-469-2436
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 Madison, WI 53711
 608-232-3800
 FAX: 608-233-0502

CHAIN OF CUSTODY

78321

A=None

B=HCL

C=H2SO4

D=HNO3

E=Ecrcore

F=Methanol

G=NaOH

H= Sodium Bisulfate Solution

I=Other

PRESERVATION CODES

D-HNO3

I=Other

L=Other

FILTERED? (YES/NO)

EnChem Level III (Subject to Surchage)

EnChem Level IV (Subject to Surchage)

LABORATORY ID

Lab Use Only

FIELD ID

REGULATORY PROGRAM

US T
RCRA
SDWA
NPDES
CERCLA

COLLECTION

MATRIX

DATE

TIME

WATER

SOIL

AIR

CHARAC.

BIOTA

STUDY

COLLECTOR

LAB

920839

En Chem, Inc. Cooler Receipt Log

Batch No.

Project Name or ID Roxanna Marsh

No. of Coolers: 3 Temps: 3, 2, 3 °C

A. Receipt Phase: Date cooler was opened: 3/2/02

By: RJC

- 1: Were samples received on ice? (Must be ≤ 6 C) YES NO²
- 2: Was there a Temperature Blank? YES NO
- 3: Were custody seals present and intact? (Record on COC) YES NO
- 4: Are COC documents present? YES NO²
- 5: Does this Project require quick turn around analysis? YES NO
- 6: Is there any sub-work? YES NO
- 7: Are there any short hold time tests? YES NO
- 8: Are any samples nearing expiration of hold-time? (Within 2 days) YES¹ NO Contacted by/Who _____
- 9: Do any samples need to be Filtered or Preserved in the lab? YES¹ NO Contacted by/Who _____

B. Check-in Phase: Date samples were Checked-in: 3/2/02

By: RJC

- 1: Were all sample containers listed on the COC received and intact? YES NO² NA
- 2: Sign the COC as received by En Chem. Completed YES NO
- 3: Do sample labels match the COC? YES NO²
- 4: Check sample pH of preserved samples. (Not VOCs) Completed YES NO NA
- 5: Do samples have correct chemical preservation? YES NO² NA
- 6: Are dissolved parameters field filtered? YES NO² NA
- 7: Are sample volumes adequate for tests requested? YES NO²
- 8: Are VOC samples free of bubbles >6mm YES NO² NA
- 9: Enter samples into logbook. Completed YES NO
- 10: Place laboratory sample number on all containers and COC. Completed YES NO
- 11: Complete Laboratory Tracking Sheet (LTS). Completed YES NO NA
- 12: Start Nonconformance form. YES NO NA
- 13: Initiate Subcontracting procedure. Completed YES NO NA
- 14: Check laboratory sample number on all containers and COC. YES NO NA

Short Hold-time tests:

48 Hours or less	7 days	Footnotes
Coliform (6 hrs)	Flashpoint	1 Notify proper lab group immediately.
Hexavalent Chromium (24 Hrs)	TSS	2 Complete nonconformance memo.
BOD	Total Solids	
Nitrite or Nitrate	TDS	
Low Level Mercury	Sulfide	
Ortho Phosphorus	Free Liquids	
Turbidity	Total Volatile Solids	
Surfactants	Aqueous Extractable Organics- ALL	
Sulfite	Unpreserved VOC's	
En Core Preservation	Ash	
Color		

EnChem Laboratories**COVER PAGE - GENERAL CHEMISTRY ANALYSIS DATA PACKAGE**SDG No.: 920839Contract: ROXANNA MARSH

Lab Sample ID	Client Sample ID	QC Description
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920839-003	FW-RM-12-SS	
920839-004	FW-RM-16-SS	
920839-005	FW-RM-02-SS	
920839-006	FW-RM-06-SS	
920839-007	FW-RM-05-SS	
920839-008	FW-RM-17-SS	
920839-009	FW-RM-07-SS	
920839-010	FW-RM-08-SS	
920839-011	FW-RM-09-SS	
920839-012	FW-RM-01-SS	
920839-013	FW-RM-04-SS	
920839-015	FW-RM-03-SS	
920839-017	FW-RM-08-CS-2.3-4.4	
920839-018	FW-RM-08-CS-1-2.3	
920839-019	FW-RM-09-CS-1-3.5	
920839-020	FW-RM-09-CS-3.5-4.9	
920839-021	FW-RM-17-CS-0-1.5	
920839-023	FW-RM-17-CS-1.5-3.5	
920839-028	MB1920839	Method Blank
920839-029	MB1920839LCS	Laboratory Control Sample
920839-030	MB1920839LCSD	Laboratory Control Sample D
920839-022	FW-RM-RB-01	
920839-031	MB2920839	Method Blank
920839-032	MB2920839LCS	Laboratory Control Sample
920839-033	MB2920839LCSD	Laboratory Control Sample D
920839-014	FW-RM-01-SSMS	Matrix Spike
920839-027	FW-RM-01-SSMSD	Matrix Spike Duplicate

Comments:

Signature:



Name

Michael J Helmann

Date:

4/12/02

Title:

Wet Chemistry Group Leader

- Analytical Report -

Project Name : ROXANNA MARSH
Project Number : 1980.0208.0100
Field ID : FW-RM-15-SS
Lab Sample Number : 920839-001
Lab Project Number : 920839

Submitter : FOSTER WHEELER
Report Date : 04/12/2002
Collection Date : 03/19/2002
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	630	390	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	2.2	0.19	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	26.6		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	230000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	240000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	230000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	230000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	230000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-10-SS

Collection Date : 03/19/2002

Lab Sample Number : 920839-002

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	1500	350	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	1.4	0.17	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	29.4		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	85000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	91000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	110000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	63000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	78000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH
Project Number : 1980.0208.0100
Field ID : FW-RM-12-SS
Lab Sample Number : 920839-003
Lab Project Number : 920839

Submitter : FOSTER WHEELER
Report Date : 04/12/2002
Collection Date : 03/19/2002
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	83	20	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	4.3	0.22	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	22.9		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	220000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	270000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	140000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	280000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	210000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-16-SS

Collection Date : 03/19/2002

Lab Sample Number : 920839-004

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	1800	400	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	2.2	0.19	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	26.2		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	140000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	130000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	130000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	100000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	200000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH
Project Number : 1980.0208.0100
Field ID : FW-RM-02-SS
Lab Sample Number : 920839-005
Lab Project Number : 920839

Submitter : FOSTER WHEELER
Report Date : 04/12/2002
Collection Date : 03/19/2002
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	3500	380	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	3.4	0.18	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	27.2		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	240000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	250000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	220000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	240000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	230000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-06-SS

Collection Date : 03/19/2002

Lab Sample Number : 920839-006

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	1400	310	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	1.8	0.15	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	33.7		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	130000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	130000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	100000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	130000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	150000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH
Project Number : 1980.0208.0100
Field ID : FW-RM-05-SS
Lab Sample Number : 920839-007
Lab Project Number : 920839

Submitter : FOSTER WHEELER
Report Date : 04/12/2002
Collection Date : 03/19/2002
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	3100	430	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	13	0.21	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	24.1		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	220000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	230000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	240000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	220000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	200000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-17-SS

Collection Date : 03/19/2002

Lab Sample Number : 920839-008

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	12000	1300	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	20	0.15	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	32.7		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	210000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	210000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	180000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	240000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	200000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH
Project Number : 1980.0208.0100
Field ID : FW-RM-07-SS
Lab Sample Number : 920839-009
Lab Project Number : 920839

Submitter : FOSTER WHEELER
Report Date : 04/12/2002
Collection Date : 03/19/2002
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	2000	380	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	2.0	0.14	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	34.6		%	*	03/29/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	91000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	68000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	110000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	72000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	110000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-08-SS

Collection Date : 03/19/2002

Lab Sample Number : 920839-010

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	1100	340	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	0.71	0.16	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	30.4		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	110000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	130000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	110000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	84000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	100000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-09-SS

Collection Date : 03/19/2002

Lab Sample Number : 920839-011

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	93	21	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	2.0	0.23	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	21.9		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	150000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	140000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	160000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	140000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	170000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-01-SS

Collection Date : 03/19/2002

Lab Sample Number : 920839-012

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	4500	510	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	4.7	0.24	%	N *	04/01/02	SW846 9071A	SW846 9071A
Solids, percent	20.6		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	210000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 1	200000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 2	220000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 3	210000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060
TOC replicate 4	210000	2000	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-04-SS

Collection Date : 03/19/2002

Lab Sample Number : 920839-013

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	96	86	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	0.35	0.10	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	48.4		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	14000	200	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 1	12000	200	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 2	14000	200	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 3	11000	200	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 4	17000	200	mg/kg		03/28/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH
Project Number : 1980.0208.0100
Field ID : FW-RM-03-SS
Lab Sample Number : 920839-015
Lab Project Number : 920839

Submitter : FOSTER WHEELER
Report Date : 04/12/2002
Collection Date : 03/19/2002
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	2000	310	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	1.2	0.15	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	33.7		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	98000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 1	110000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 2	110000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 3	71000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 4	100000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-08-CS-4.4-7.7

Collection Date : 03/19/2002

Lab Sample Number : 920839-016

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Solids, percent	76.9		%		03/28/02	SM2540G-MOD	SM2540G-MOD

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-08-CS-2.3-4.4

Collection Date : 03/19/2002

Lab Sample Number : 920839-017

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	< 6.9	6.9	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	< 0.075	0.075	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	66.6		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	39000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 1	35000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 2	41000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 3	43000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 4	37000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-08-CS-1-2.3

Collection Date : 03/19/2002

Lab Sample Number : 920839-018

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	30	10	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	0.15	0.11	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	44.7		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	62000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 1	64000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 2	45000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 3	72000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 4	69000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-09-CS-1-3.5

Collection Date : 03/19/2002

Lab Sample Number : 920839-019

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	< 13	13	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	0.19	0.14	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	35.0		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	76000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 1	70000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 2	87000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 3	76000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 4	69000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH Submitter : FOSTER WHEELER
Project Number : 1980.0208.0100 Report Date : 04/12/2002
Field ID : FW-RM-09-CS-3.5-4.9 Collection Date : 03/19/2002
Lab Sample Number : 920839-020 Matrix Type : SOIL
Lab Project Number : 920839 WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	< 9.2	9.2	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	0.11	0.099	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	50.3		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	31000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 1	42000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 2	26000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 3	25000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 4	31000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-17-CS-0-1.5

Collection Date : 03/19/2002

Lab Sample Number : 920839-021

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	10000	1200	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	1.6	0.14	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	34.8		%		03/28/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	160000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 1	140000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 2	180000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 3	170000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 4	160000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-RB-01

Collection Date : 03/19/2002

Lab Sample Number : 920839-022

Matrix Type : WATER

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Oil & Grease, total recoverable	1.1	4.8	mg/L	B A	03/29/02	EPA 413.1	EPA 413.1
TOC average of reps 1-4	< 1.0	1.0	mg/L		04/04/02	SW846 9060	SW846 9060
TOC replicate 1	< 1.0	1.0	mg/L		04/04/02	SW846 9060	SW846 9060
TOC replicate 2	< 1.0	1.0	mg/L		04/04/02	SW846 9060	SW846 9060
TOC replicate 3	< 1.0	1.0	mg/L		04/04/02	SW846 9060	SW846 9060
TOC replicate 4	< 1.0	1.0	mg/L		04/04/02	SW846 9060	SW846 9060

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : FW-RM-17-CS-1.5-3.5

Collection Date : 03/19/2002

Lab Sample Number : 920839-023

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	< 7.1	7.1	mg/kg		04/02/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	0.12	0.083	%		04/01/02	SW846 9071A	SW846 9071A
Solids, percent	60.2		%		03/29/02	SM 2540G M	SM 2540G M
TOC average of rep 1-4	19000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 1	18000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 2	17000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 3	22000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060
TOC replicate 4	20000	2000	mg/kg		03/28/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : MB1920839

Collection Date :

Lab Sample Number : 920839-028

Matrix Type : SOIL

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Acid Volatile Sulfide	< 4.6	4.6	mg/kg		03/29/02	EPA DRAFT	EPA DRAFT
Oil & Grease, total recoverable	< 0.050	0.050	%		04/01/02	SW846 9071A	SW846 9071A
TOC average of rep 1-4	< 200	200	mg/kg		03/27/02	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

- Analytical Report -

Project Name : ROXANNA MARSH

Submitter : FOSTER WHEELER

Project Number : 1980.0208.0100

Report Date : 04/12/2002

Field ID : MB2920839

Collection Date :

Lab Sample Number : 920839-031

Matrix Type : WATER

Lab Project Number : 920839

WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Oil & Grease, total recoverable	1.3	5.0	mg/L	B A	03/29/02	EPA 413.1	EPA 413.1
TOC average of reps 1-4	< 1.0	1.0	mg/L		04/04/02	SW846 9060	SW846 9060
TOC replicate 1	< 1.0	1.0	mg/L		04/04/02	SW846 9060	SW846 9060
TOC replicate 2	< 1.0	1.0	mg/L		04/04/02	SW846 9060	SW846 9060
TOC replicate 3	< 1.0	1.0	mg/L		04/04/02	SW846 9060	SW846 9060
TOC replicate 4	< 1.0	1.0	mg/L		04/04/02	SW846 9060	SW846 9060